

Amendment and Response

Applicant: Lizhang Yang

Serial No.: 10/687,195

Filed: October 16, 2003

Docket No.: 58829US002

Title: APPARATUS AND METHOD FOR TRANSITIONING FIBER OPTIC CABLES

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of the claims:

1. (Currently Amended) An apparatus for ribbonizing fiber optic cables, the apparatus comprising at least one channel, each channel comprising:
 - (a) an input zone for holding a plurality of fiber optic cables, each cable having at least one optical fiber;
 - (b) a transition zone adjacent to the input zone, the transition zone configured to contain all of the optical fibers of the plurality of fiber optic cables in a common space;
 - (c) an output zone adjacent to the transition zone, the output zone comprising at least one slot, each slot having a maximum width that is equal to a multiple of the optical fiber diameter plus one half optical fiber diameter.
2. (Original) The apparatus of claim 1, wherein the transition zone has a geometry that will not violate the minimum bend radius of the optical fiber.
3. (Original) The apparatus of claim 1, wherein the output zone further comprises at least one holding groove for holding non-active optical fibers, the holding grooves disposed adjacent to the slots.
4. (Original) The apparatus of claim 3, wherein the holding grooves are disposed between the slots.
5. (Original) The apparatus of claim 3 wherein the slots are disposed between the holding grooves.
6. (Original) The apparatus of claim 1, wherein the input zone has a first depth that is larger than a second depth of the output zone.

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7. (Original) The apparatus of claim 6, wherein the transition zone has an incline starting from the first depth of the input zone and ending at the second depth of the output zone.
8. (Original) The apparatus of claim 1 further comprising regions disposed along the transition zone.
9. (Original) The apparatus of claim 1, fabricated from a low adhesion polymer or a composite comprising a base overcoated with a low adhesion polymer.
10. (Original) The apparatus of claim 9, wherein the low adhesion polymer is tetrafluoroethylene fluorocarbon polymer.
11. (Original) The apparatus of claim 9, wherein the base is fabricated from a metal selected from the group consisting of aluminum, steel, stainless steel, copper and copper alloys.
12. (Original) The apparatus of claim 1 further comprising indicating means bracketing the transition zone.
13. (Original) The apparatus of claim 1 in combination with a plurality of fiber optic cables, each cable having at least one optical fiber, wherein the fiber optic cables are disposed in the input zone and the optical fibers are disposed in the transition zone and the output zone.
14. (Original) The apparatus of claim 13, wherein the optical fibers lie parallel to one another in the output zone.
15. (Withdrawn) A method of making a ribbonized assembly comprising the steps of:
 - (a) providing a plurality of fiber optic cables, each cable having at least one optical fiber surrounded by a protective jacket; then

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(b) stripping the protective jacket around at least one end of the fiber optic cable to expose the optical fibers;

(c) disposing the optical fibers in the channels of the apparatus of claim 1 such that the fiber optic cable lies in the input zone and the exposed optical fibers lies in the output zone; then

(d) applying an ultraviolet light curable resin to the transition zone; and

(e) curing the ultraviolet light curable resin.

16. (Withdrawn) The method of claim 15 further comprising the step of applying the ultraviolet light curable resin to the output zone of the apparatus.

17. (Withdrawn) The method of claim 15, wherein after the ultraviolet light curable resin has been applied and before the resin is cured, the method further comprises a step of removing excess ultraviolet light curable resin.

18. (Withdrawn) The method of claim 15 further comprising the steps of:

(a) providing a fiber optic ferrule having a front face and a plurality of internal grooves having a first pitch;

(b) disposing the ribbonized assembly in the ferrule such that the exposed optical fiber lies in the internal grooves of the ferrule fibers protrude from the front face of the ferrule; and

(c) attaching the ribbonized assembly to the ferrule.

19. (Withdrawn) The method of claim 18 further comprising polishing the front face of the ferrule.

20. (Withdrawn) The method of claim 15 wherein both ends of the fiber optic cable are stripped, and optical connectors are attached to both ends.

21. (Withdrawn) The method of claim 20, wherein the connector is selected from the group consisting of simplex fusion splint, parallel fusion splint, mechanical splice splint,

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simplex v-groove (polymeric, ceramic, silica, or silicon), array v-groove, boot, furcation block, shuffle block, and combinations thereof.

22. (Withdrawn) The method of claim 15 wherein the fiber optic cable is a tight buffer fiber cable or a ruggedized fiber cable.